



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D2432-3
Job Sheet 169147



Part No: D2432-3

Job Qty: 6 ea

Part Name: 206 (24") Bearpaw



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 12/4/17

Job Tracking No:

Created By: Linda Lacelle

Due Date: 12/15/17

Description:

Type: Stock

Note: DWG REV H IPP REV:A AS PER REV G 12-07-24 JLM VERIFIED BY:DD IPP REV:B 12.10.17 AS PER DWG REV.H DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	6 Ea		12/14/17	0.00	0.00	Start Up Container		de 17/12/04
120	Waterjet	6 pcs		12/14/17	0.00	1.43	Waterjet1		de 17/12/04
130	CNC Vertical Machining	6 pcs		12/15/17	0.66	9.85	HAAS 1		9/2 SC
140	QC	6 pcs		12/15/17	0.00	0.00	QC2		de 17/12/04
150	QC	6 pcs		12/15/17	0.00	0.00	QC8		de 17-12-11
160	Packaging	6 pcs		12/15/17	0.00	0.00	Packaging3	5/4/3/1	de 17/12/04
170	QC21-SA	6 Ea		12/15/17	0.00	0.00	QC21		de 17/12/04

Part Op 120 - Cut Blank as per D2432 File

Descriptions: 130 - 1-Inspect material for defects or damage prior to machining 2-Machine as per Folio B122 and Dwg D2432 Identify as D2432-3

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	MUHMWB10	22	1,092	0	0

Part Specifications

Specifications could not be found.

Plex 12/4/17 8:15 AM dart.lacelle.linda

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS _____ tube ☐ Water Jet ☐ Engineering ☐ Prod. Eng. Coord. ☐ Quality ☐ Other ☐			
Date : _____		Step #: _____		 Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K64 1K7 CANADA TEL.: 1 613 632-5200 Email: sales@dartaero.com www.dartaerospace.com S017155 206 (24") Bearpaw D2432-3 Start up Operation PART NO: Revision: Operation: Change No:			
Date : _____		Step #: _____					
Description Work Order Deviation 							
Root Cause <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; border-right: 1px solid black;"> Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width:50%;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> </tr> </table>		Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; border-right: 1px solid black;"> Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ </td> <td style="width:50%;"> Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐ </td> </tr> </table>		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
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OTHER : _____		center Drill Holes ☐					

DART AEROSPACE LTD		Work Order: 16947
Description: 206 Bearpaw		Part Number: D2432-3
Inspection Dwg: D2432	Rev: H	Page 1 of 1

INSPECTION SHEET

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	Ø0.260	+0.006/-0.001	0.260	✓	G.P.	
B	0.93	+/-0.030	0.930	✓	Ver	ED-6
C	0.300	+0.030/-0.000	0.310	✓	Ver	ED-6
D	0.06 x 45°	+/-0.030 x +/-0.5°	0.06x45°	✓	Ver	ED-6
E	2.000	+/-0.010	2.000	✓	Ver	ED-6
F	11.000	+/-0.010	11.000	✓	TAPE	
G	20.000	+/-0.010	20.000	✓	TAPE	
H	4.250	+/-0.005	4.253	✓	Ver R.C.	Calculated
I	5.50	+/-0.030	5.502	✓	Ver	Calculated
J	19.00	+/-0.030	19.00	✓	TAPE	Calculated
K	23.75	+/-0.030	23.75	✓	TAPE	
L	0.25 x 45°	+/-0.030 x +/-0.5°	0.25x45°	✓	TAPE	
M	0.95	+/-0.030	0.958	✓	Ver	ED-6
N	0.63	+/-0.030	0.625	✓	Ver	ED-6
O	0.250	+/-0.010	0.246	✓	Ver	ED-6
P	0.380	+0.030/-0.010	0.396	✓	Ver	ED-6
Q	1.4	+/-0.030	1.385	✓	Ver ED-6	Calculated
R	0.38	+/-0.030	0.38	✓	Ver	ED-6
S	R0.25	+/-0.030	R0.25	✓	R.G.	
T						
U						
V						
W						
X						
Y						
Z						
AA						
AB						

Measured by: SC.F.M.L.	Checked by: D.F.	QC Inspector:
Date: 17/12/10	Date: 17-12-11	Date:

Engineering Approval: (If necessary)	Date:
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Rev	Date	Change	Revised by	Approved
A	16.06.23	New Issue	KJ	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

8 7 6 5 4 3 2 1

D

D

C

C

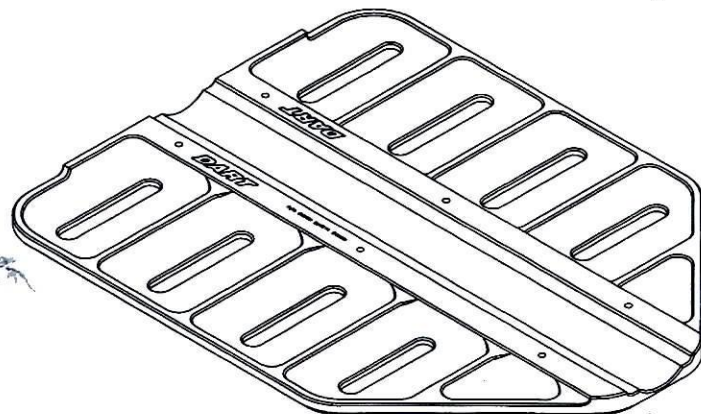
B

B

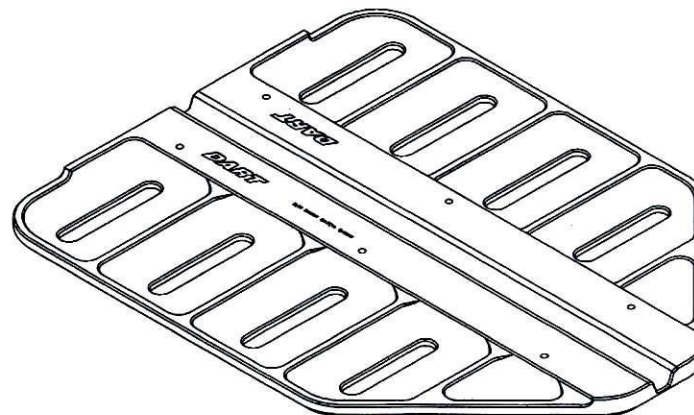
A

A

8 7 6 5 4 3 2 1



D2432F BEARPAW



D2432-3 BEARPAW

169147

RELEASED
2012-10-16

H	RIB HEIGHTS CHANGED TO CONDITION OF REV. F. SEE REV F FOR DETAILS.	AP	12.09.24
G	UPDATE DRAWING FORMAT, REMOVED D2432B, ADD D2432-3, ADDED DIMENSION 7.52 (D1-2)	AP	12.05.02
F	CHANGE C'BORE, ADD B AND F P/N	-	98.05.12
E	CHANGE C'BORE DEPTH, BORE RADIUS	-	97.02.27
D	MOVE SLOT	-	96.06.04
C	CHANGE BORE AND C'BORE DEPTH	-	96.03.26
B	RE-DESIGN	-	96.01.24
A	NEW ISSUE	-	95.10.31
REV.	DESCRIPTION	BY	DATE
DESIGN	LE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D2432 TITLE BEARPAW SCALE NTS COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DRAWN	AP		
CHECKED	ASS		
MFG. APPR.	21		
APPROVED	10		
DE APPR.	10	REV. H SHEET 1 OF 3	
DATE	12.09.24		

DQA: _____ Date: _____

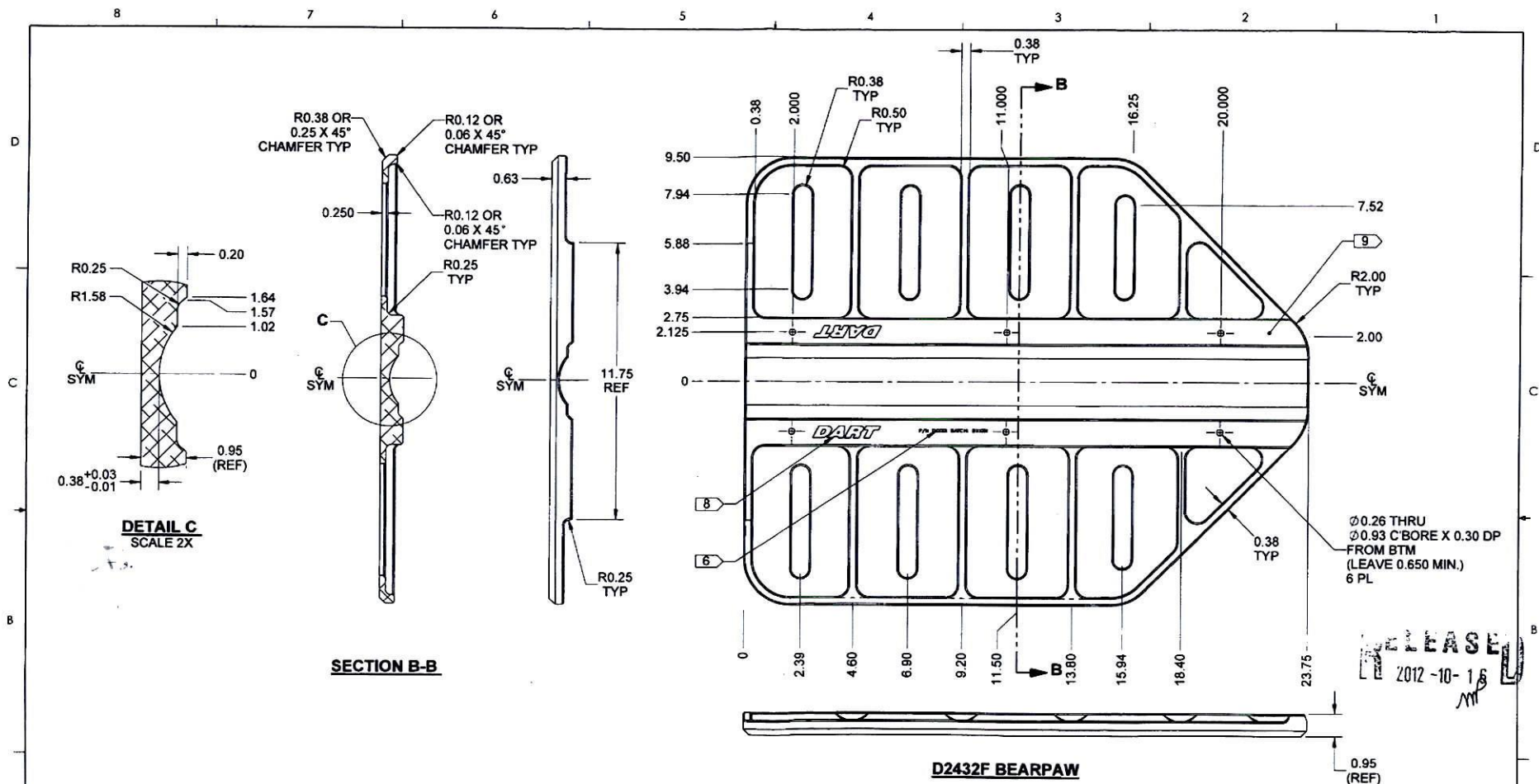


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐					



NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL, 1.000 THICK MACHINED TO 0.950 (REF DART SPEC. MUHMB10)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART NUMBER "D2432" AND BATCH NUMBER "BXXXXX" IN ACCORDANCE WITH QSI 044 METHOD 6.3
- 7) WEIGHT: 5.87 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.012
- 9) APPLY 0.06 x 45° CHAMFER TO ALL EDGES ON SIDE SHOWN UNLESS OTHERWISE INDICATED
- 10) PROFILE PER DRAWING FILE "D2434F-REVH.STP"

DESIGN	LE	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ALS	DRAWING NO.	REV. H
MFG. APPR.	2/1	D2432	SHEET 2 OF 3
APPROVED	1/2	TITLE	SCALE
DE APPR.	1/2	BEARPAW	NTS
DATE	12.09.24	COPYRIGHT © 1995 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

DQA: _____ Date: _____

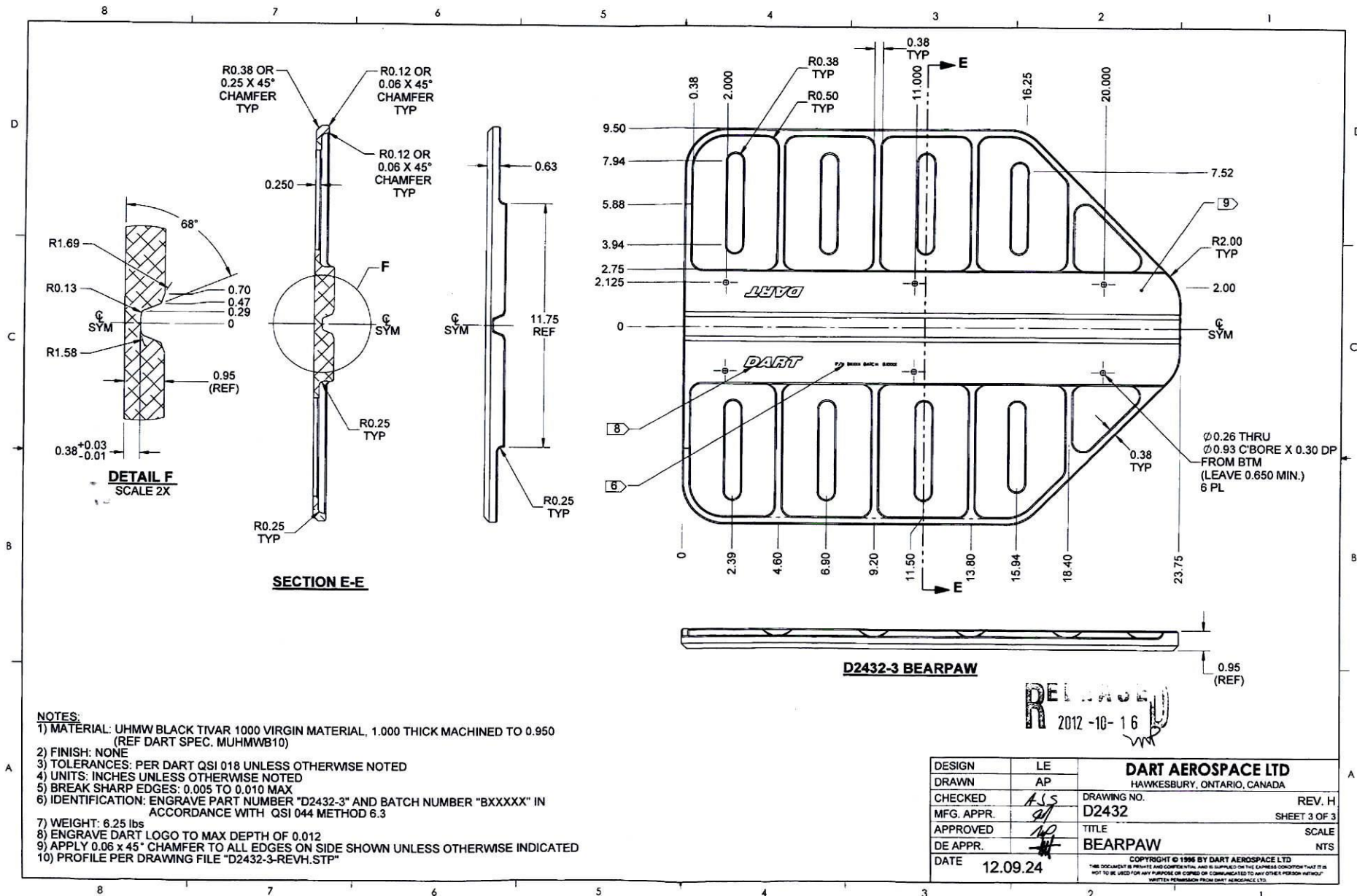


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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



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WORK ORDER NON-CONFORMANCE / UPDATE

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OTHER : ☐									